

## *New Jersey Department of Transportation*

1035 Parkway Avenue, PO Box 600, Trenton, New Jersey 08625-0600



# *Baseline Document Change Announcement*

*NJDOT Design Manual – Roadway (English)*

**BDC09MR-02**

**October 28, 2009**

**SUBJECT: Revisions to Section 11 Highway Lighting Systems &  
Section 12 Traffic Signal Design**

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AASHTO has issued an updated policy on Geometric Design of Highways and Streets. The Department has adopted this 2004 policy for the design of projects. As a result, Sections 11 & 12 of the 2001 *Design Manual-Roadway* are revised accordingly. The revised Sections 11 & 12 shall replace the current Sections 11 & 12. The remaining sections of the Design Manual are undergoing revisions and will be issued as they become available.

A summary of revisions is as follows.

### **Section 11 Highway Lighting Systems**

- **Subsection 11.1, General**  
Formatting changes.
- **Subsection 11.2, Reference Publications**  
Formatting changes.
- **Subsection 11.3.1, Warrants for Highway Lighting**  
Formatting changes.
- **Subsection 11.3.2, Selection of Types of Highway Lighting**  
Subsection revised.
- **Subsection 11.3.3, Level of Illuminance**  
Formatting changes.
- **Subsection 11.3.4, Uniformity of Illuminance**  
Formatting changes.
- **Subsection 11.3.5, Basis for Lighting Calculation**  
Subsection revised.
- **Subsection 11.3.6, Lighting Calculations**  
Subsection revised.
- **Subsection 11.3.7, Underdeck Lighting**  
Formatting changes.
- **Subsection 11.3.8, Conduit**  
Subsection revised.
- **Subsection 11.3.9, Cables and Wire**  
Formatting changes.
- **Subsection 11.3.10, Junction Boxes and Foundations**  
Subsection revised.
- **Subsection 11.3.11, Incoming Service**

- Subsection revised.
- **Subsection 11.3.12, Load Center Designations**  
Formatting changes.
- **Subsection 11.3.13, Circuitry and Other Considerations**  
Formatting changes.
- **Subsection 11.4, Sign Lighting**  
Formatting changes.
- **Subsection 11.5, Existing Highway Lighting System**  
Formatting changes.
- **Subsection 11.6, Temporary Lighting**  
Subsection revised.
- **Subsection 11.6.1 Designing the Temporary Lighting**  
Subsection revised.
- **Subsection 11.7, Highway Lighting Plans**  
Subsection revised.
- **Subsection 11.8, Lighting At Intersections**  
Subsection revised.
- **Subsection 11.9, Lighting At Intersections**  
Formatting changes
- **Subsection 11.10, Functional Historic Lighting**  
Subsection revised.
- **Subsection 11.11, Mid-Block Pedestrian Crossings**  
New Subsection.
- **Figure 11-A, Formatting Changes.**
- **Figure 11-B, Formatting Changes.**
- **Figure 11-C, Formatting Changes.**
- **Lighting Forms 1-8, No Changes.**
- **Voltage Drop Forms 1&2, revised.**

## **Section 12 Traffic Signal Design**

- **Subsection 12.1, General**  
Formatting changes.
- **Subsection 12.2, Reference Publications**  
Formatting changes.
- **Subsection 12.3.1, Warrants for Traffic Signals**  
Subsection revised.
- **Subsection 12.3.2, Traffic Signal Design –“TS” Plan - General**  
New Subsection added.  
Existing Subsection “Traffic Signal Controller” is now Subsection 12.3.7  
The fourth bulleted paragraph is revised.
- **Subsection 12.3.3, Traffic Signal Timing and Operation - General**  
New Subsection added.  
Existing Subsection “Traffic Signal Standards” is now Subsection 12.3.8
- **Subsection 12.3.4, Pedestrian Timing Considerations - General**  
New Subsection added.  
Existing Subsection “Traffic Signal Standards” is now Subsection 12.3.8
- **Subsection 12.3.5, Pre-Emption**  
New Subsection added.  
Existing Subsection “Traffic Signal Indications” is now Subsection 12.3.9
- **Subsection 12.3.6, Temporary Traffic Signals**  
Subsection revised and moved.  
Existing Subsection was 12.07
- **Subsection 12.3.7, Traffic Signal Controller**

Formatting changes.

Existing Subsection was 12.03.2

- **Subsection 12.3.8, Traffic Signal Standards**

Subsection revised.

Existing Subsection was 12.03.3

Superseded

**Subsection 12.3.9, Traffic Signal Indications**

Formatting changes.  
Removed signal indication types, since they are in the Electrical Material Specifications  
Existing Subsection was 12.03.4

- **Subsection 12.3.10, Intersection Lighting**

Formatting changes.  
Existing Subsection was 12.03.5

- **Subsection 12.3.11, Conduits**

Subsection revised.  
Existing Subsection was 12.03.6

- **Subsection 12.3.12, Cables and Wires**

Subsection revised.  
Existing Subsection was 12.03.7

- **Subsection 12.3.13, Vehicular Detection**

Subsection revised adding Image Detection.  
Existing Subsection was 12.03.8

- **Subsection 12.3.14, Junction Boxes**

Formatting changes.  
Existing Subsection was 12.03.9

- **Subsection 12.3.15, Incoming Service**

Formatting changes.  
Existing Subsection was 12.03.9

- **Existing Subsections**

**12.04, Existing Traffic Signal;**  
**12.05, Traffic Signal Design Considerations;**  
**12.06, Traffic Signal Plans**  
**12.07, Temporary Traffic Signals**

Are deleted. The design considerations of these subsections are incorporated throughout this revised section.

- **Figure 12-A,** Formatting Changes.
- **Figure 12-B,** Formatting Changes.
- **Figure 12-C,** Formatting Changes.
- **Figure 12-D,** Formatting Changes.

**Implementation Code R (ROUTINE)**

Changes must be implemented in all applicable Department projects scheduled for Final Design Submission at least one month after the date of the BDC announcement. This will allow designers to make necessary plan, specifications, and estimate/proposal changes without requiring the need for an addenda or postponement of advertisement or receipt of bids.

**Recommended By:**

Original Signed by

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Walter McGrosky  
Director,  
Capital Program Support

**Approved By:**

Original Signed by

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Richard T. Hammer  
Assistant Commissioner,  
Capital Program Management